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DESCRIPTION OF INVENTION

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(54) PRODUCTION METHOD OF FILTER MATERIAL

It is known a production method of charged filter materials through the forming of filter cloth followed by its exposure in direct current electrical field. Produced in a such way filter
material is efficient only at applied electrical field. The charge disappears in case of electrical field absence. Besides, the filtering efficiency of these materials is low.

At the process of cloth exposure in electrical field it is offered a passage of liquid vapor with dielectric constant of

15-115 through the cloth followed by removal of the liquid vapor with the air blow.

As the liquids isopropyl alcohol, methanamide, ethyl alcohol or dimethylformamide are used with corresponding values of dielectric constants: 18; 111.8; 25; 38.

In order to accumulate larger charge in the cloth and better filtering the authors offer prior the cloth exposure in electrical field, an additional cloth treatment with the use of

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5% iodide solution in acetone or mixture of it with hydroquinone solution in acetone followed by evaporation of acetone.

E x a m p l e 1: Layer of polypropylene or polyamide filaments is placed between two metalic grids to which direct current voltage of 5-10 kV is applied. Then a clean air, saturated with vapors of isopropyl alcohol, methanamide, ethyl alcohol or demithylformamide, is passed through the layer within 10-20 min, after which the condenced liquid from the layer is removed by the blow of clean air within 10-20 min through the layer. Then the voltage is disconnected.

An aerosol of a standard oil vapor is filtered through this layer.

Passage at filtering is considerable lower by comparison with standard filters.

E x a m p l e 2: Layer of polypropylene filaments is kept within 24 hrs in 5% solution of iodide in acetone or mixture of 0.05% solution of hydroquinone and 0.1% of iodide in acetone and

then during 1 hr the layer is dried in flow of clean air. Then the layer is placed between two metalic grids and process is carried out in the same way as in Example 1.

An aerosol of a standard oil vapor is filtered through this layer.

Passage at filtering is considerable lower by comparison with standard filters and Example 1.

S u b j e c t o f i n v e n t i o n

1. Production method of filter material through the forming of filament filter cloth followed by its exposure in direct current electrical field, is d i f f e r e n t i a t e d by the fact,

that for the goal of better filtering ability at the process of exposure in electrical field a vapor of organic liquid with dielectric constant 15-115, for example ethyl alcohol, dimethyl-formamide, are passed through the cloth followed by removal of the organic liquid from the cloth by the use of air blow through.

2. Method according p.1, is d i f f e r e n t i a t e d by the fact, that the filament filter cloth, prior exposure in electrical field, is treated with iodide solution or its

mixture
with hydroquinone solution in acetone followed by removal of acetone through drying out.